

United States
Kowalski

XR 3,929,017

X 69158

X 69476

X 69592

X 74351

X 75721

[11] 3,929,017

[45] Dec. 30, 1975

[54] FLOW MONITOR AND SAMPLE CONTROL
DEVICE

[75] Inventor: William S. Kowalski, Hinsdale, Ill.

[73] Assignee: Elan Engineering Corporation,
Hinsdale, Ill.

[22] Filed: Oct. 5, 1973

[21] Appl. No.: 403,841

[52] U.S. Cl.: 73/198; 73/215; 73/421 B;
235/151.34

[51] Int. Cl.²: G01F 1/20

[58] Field of Search: 73/198, 422 R, 215, 216,
73/421 B, 301, 302; 235/151.34

[56] References Cited

UNITED STATES PATENTS

2,153,450	4/1939	Borden	73/215
3,376,745	4/1968	Davis	235/151.34
3,476,538	11/1969	Trethewey	73/302
3,496,346	2/1970	Asia et al.	235/151.34
3,719,081	3/1973	Lynn et al.	73/198

Primary Examiner—S. Clement Swisher
Attorney, Agent, or Firm—Carl C. Batz

[57]

ABSTRACT

A portable device and method for monitoring the flow of liquids and automatically controlling the periodic taking of samples of such liquids, said device utilizing weirs of such as Parshall flumes of various types and being sensitive to the pressure required to pass a gas through a submerged tube into liquids behind the weir, said device being operative to convert the value of such pressure to electrical values representing rate of flow and total volume over a period, and further being effective for triggering the taking of liquid samples at controlled intervals of time. The device also indicates and records the values of rate of flow, volume of liquids and the times at which samples of liquids are taken, and is capable of automatically varying the intervals at which samples are taken in accordance with increase or decrease in rate of flow.

18 Claims, 1 Drawing Figure

